

to extracting the oil, two varieties of machines are used. One is designated a 'knuckle' machine, in which the nuts drop from a hopper between heavy knuckles, thus cracking the shell. The other is called an 'impact' machine. It operates by a centrifugal motion which propels the nut against the side of a large metal bowl with sufficient force to break the shell. The oil can then be extracted from this copra, or crushed product.

"The oil is high grade, said to be superior to coconut oil, and finds a ready sale for cooking purposes, being claimed to be adapted for any use to which a good cooking oil may be put.

"The Aguan River valley contains a single field of these nut-bearing trees extending 60 to 70 miles up the river from its mouth and with an average width of 10 to 12 miles." (Willard.)

**50528. ANANAS SATIVUS** Schult. f. Bromeliaceæ. **Pineapple.**

From San Jacinto, D. F., Mexico. Shoots presented by Sr. José Duvallon, Director de Agricultura. Received June 19, 1920.

"A spineless pineapple, called *Cayena*, from Coatepec zone." (Duvallon.)

**50529. CYCLAMEN ROHLFSIANUM** Aschers. Primulaceæ. **Cyclamen.**

From Libia, Tripoli. Tubers presented by Dr. E. O. Fenzi. Received June 19, 1920.

"I hope that some of your cyclamen specialists may succeed in evolving a new type combining the characters of Cyclamen and of Dodecatheon." (Fenzi.)

A plant native to the grottos of Gureina, Libia, where the yellow ellipsoid tubers grow in the fissures. The stem, 5 centimeters long, bears circular leaves, variegated with silvery splotches and variously incised, on petioles 3 to 18 centimeters long. The fragrant pale-purple flowers appear in autumn; the exserted anthers bring it near the neighboring genus, Dodecatheon. (Adapted from *Bulletin de l'Herbier Boissier*, vol. 5, p. 523.)

**50530. ZELKOVA SINICA** C. Schneid. Ulmaceæ.

From Jamaica Plain, Mass. Seeds presented by Prof. C. S. Sargent, director, Arnold Arboretum. Received June 19, 1920.

A rare Chinese tree about 17 meters (60 feet) high, with smooth pale-gray bark which exfoliates in small thin roundish flakes, leaving many brown scars. The small leaves are crenately serrate. (Adapted from *Sargent, Plantae Wilsonianae*, vol. 3, p. 286.)

**50531 to 50539.**

From Keijo, Chosen (Korea). Seed presented by Miss Katherine Wambold. Received June 21, 1920.

**50531. HOLCUS SORGHUM** L. Poaceæ.

**Sorghum.**

(*Sorghum vulgare* Pers.)

"*Soo soo*; may be used for bread or porridge."

For previous introduction, see S. P. I. No. 42060.

**50532. PERILLA FRUTESCENS** (L.) Britton. Menthaceæ.

**Perilla.**

"*Täl kai*, or *täl gäi*, utilized for oiling the excellent oil paper used on mud floors in Chosen."

For previous introduction, see S. P. I. No. 42062.

**50533. PHASEOLUS ANGULARIS** (Willd.) W. F. Wight. Fabaceæ.

**Adsuki bean.**

"*Pat*, peas."

For previous introduction, see S. P. I. No. 42063.